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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,880	01/26/2001	Pierre Jeanvoine	198164US0PCT	4136

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EXAMINER

COLAIANNI, MICHAEL

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 04/01/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/646,880

Applicant(s)

Jeanvoine

Examiner

Michael Colaiaanni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 23, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 9, 11 6) ☐ Other:

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Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 22, 25-41, 43-41, 43-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 22 and 46, "refacting" should be --refractory--.

Claim 25, line 3, "elements" is deemed confusing and indefinite because the material referred to are not "elements" per se, but rather are compounds.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-7, 9, 11-13, 15-16, 18-21, 23-26, 28-31, 33, 35-37, 39-40, 42-45, 47-48 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Roberts et al. 3907674 alone or in view of Van Weert et al. 3466021.

Roberts teaches a method of making silicates from chlorinated waste material by heating the waste material using mixture of fuel and air to convert the waste to silicate materials,

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wherein the fuel and air are provided below the surface of the materials (col. 5, lines 22-68, col. 6, lines 1-29). The Examiner contends that the fuel/air mixture provided below the melt constitutes, and is also equivalent to, a "submerged burner" because the fuel/air mixture accomplishes substantially the same function (mixing the chlorinated waste and silica together), in substantially the same way (by injecting fuel and air into material to heat the material to a high temperature so as to melt the material), to achieve substantially the same result (the formation of silicate from the chlorinated waste material). Thus, Roberts teaches using "submerged burners" to heat the mass of material being heat treated to create turbulence amongst the molten particles.

Roberts also teaches using air as the oxidizer and water is produced to aid in the conversion to silica (Fig. 1, ref. no. 51 and col. 4, line 32).

Roberts also teaches that the conversion results in producing halogenated derivatives (col. 4, line 32).

Roberts also teaches that the silicates are treated to make them more compatible for use as vitrifiable batch ingredients (abstract, the compounds can be used to make glass).

Roberts also teaches introducing the waste material and the fuel below the surface of the material (Fig. 1, ref. no. 45, 39).

Roberts also teaches the reactor is either a parallelepiped or a cylindrical cavity (Fig. 1, ref. no. 10).

Roberts also teaches using a treatment means for treating the chlorinated effluents and separating the solids (Fig. 1, ref. no. 71).

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Roberts also teaches forming sodium silicate (col. 4, line 32) and that the waste is an organo-chloride waste (col. 2, lines 19-21).

However, in the alternative, it would have been prima facie obvious at the time the invention was made to combine Van Weert et al.'s teaching of premixing fuel and air and injecting the fuel/air mixture into the material to heat the material during treatment (col. 7, lines 5-16) with Roberts et al.'s method of forming silicates because Roberts teaches mixing fuel and air to heat and Van Weert et al.'s is a well known method of accomplishing the mixing of the fuel and air.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 3 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. 3907674 in view of Won et al. 4545800.

Roberts et al. teach applicant's claimed invention. See the §102(b)/103(a) rejection for Roberts et al.'s teachings. However, Roberts et al. do not teach using hydrogen, natural gas or fuel oil as the fuel.

However, Roberts do teach that using propane as the fuel is merely exemplary (col. 6, lines 45-47, propane is only used in those examples as an substitute for the organic fuel). Also, Won et al. teaches that it is known to use hydrogen as a fuel for melting glass (col. 4, lines 13-32).

It would have been prima facie obvious at the time the invention is made to combine Won et al.'s teachings with Robert et al.'s method of making silicates because Won et al. teaches that hydrogen used as fuel merely promotes forming water vapor (col. 4, lines 57-61) which Roberts' acknowledges is required for the conversion to silicate (col. 4, line 32).

8. Claims 8, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. 3907674.

Roberts et al. teach applicant's claimed invention. See the §102(b)/103(a) rejection for Roberts et al.'s teachings. However, Roberts does not explicitly teach feeding the silicate into a glass making furnace.

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However, the Examiner takes Official Notice that it is known to use silicate materials when forming glass.

It would have been prima facie obvious at the time the invention was made to use Roberts et al.'s silicate materials in a glass making method because Roberts et al. acknowledge that glass is formed by the material (abstract) and it is known to use silicates to form glass.

9. Claims 10 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. 3907674.

Roberts et al. teaches applicant's claimed invention. See the §102(b)/103(a) rejection for Roberts et al.'s teachings. However, Roberts does not explicitly teach that the reactor walls are made of refractory material.

However, Roberts et al. does teach that the temperature in the reactor is around 900°C which would obviously require a refractory material to prevent the device from disintegrating.

It would have been prima facie obvious at the time the invention was made to use a refractory lining with Roberts et al.'s device because Roberts et al. operate their device at a temperature of approximately 900°C which would require a refractory lining to prevent damaging the device.

10. Claims 14 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robert et al. 3907674.

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Roberts et al. teaches applicant's claimed invention. See the §102(b)/103(a) rejection for Roberts et al.'s teachings. However, Roberts does not explicitly teach that the product is used for detergents.

However, the Examiner takes Official Notice that it is known that silicates have numerous uses, including as detergents. Thus, using the sodium silicates produced by Roberts et al. in detergents would have been obvious.

It would have been prima facie obvious at the time the invention was made to use the silicates produced by Roberts et al.'s process in detergents because it is exceedingly well known to use silicates in detergents and doing so would increase the versatility of the process.

11. Claims 17 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. 3907674.

Roberts et al. teaches applicant's claimed invention. See the §102(b)/103(a) rejection for Roberts et al.'s teachings. However, Roberts does not explicitly teach using contaminated sand as the treatment material.

However, Roberts et al. do teach that their invention is directed to the treatment of combustible waste streams or sludges which have high chloride content (col. 1, lines 4-6). Given the broad teaching, the sludge waste of contaminated sand would be an obvious choice to be treated, especially because Roberts et al. teaches adding sand during the incineration process (col. 4, lines 42-44).

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It would have been prima facie obvious at the time the invention was made to use contaminated sand as the treatment material with Roberts et al.'s method of forming silicates for the reasons given in the body of this rejection.

12. Claims 22 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. 3907674 in view of Haga et al. 4288251.

Roberts et al. teaches applicant's claimed invention. See the §102(b)/103(a) rejection for Roberts et al.'s teachings. However, Roberts does not explicitly teach using an electrocast refractory as the lining.

However, Haga et al. teach that it is known to use electrocast refractories as high temperature furnace linings, especially in furnaces having a temperature range of 600-1400°C (col. 1, lines 29-45). Given Roberts' teaching that the temperature of his reactor is approximately 900°C, it would have been obvious to use the electrocast refractory given Haga et al.'s teachings to use such a refractory within the temperature range.

It would have been prima facie obvious at the time the invention was made to combine Haga et al.'s teachings with Roberts et al.'s method of making silicate material for the reasons given above in the body of this rejection.

Response to Arguments

13. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Colaianni whose telephone number is 703-305-5493. The examiner can normally be reached on Monday to Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin, can be reached on (703) 308-1164. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7115.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

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March 26, 2003

A handwritten signature in black ink, appearing to read "Michael Colaianni". The signature is fluid and cursive, with a long horizontal stroke at the end.

**MICHAEL COLAIANNI
PRIMARY EXAMINER**